

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
27 January 2005 (27.01.2005)

PCT

(10) International Publication Number
WO 2005/008474 A1

(51) International Patent Classification⁷: **G06F 7/58**,
H04B 1/707

(NL). NAS, Ricky, J., M. [NL/NL]; c/o Prof. Holstlaan 6,
NL-5656 AA Eindhoven (NL).

(21) International Application Number:
PCT/IB2004/051201

(74) Agent: **ELEVELD, Koop, J.**; Prof. Holstlaan 6, NL-5656
AA Eindhoven (NL).

(22) International Filing Date: 13 July 2004 (13.07.2004)

(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,
ZW.

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
03102265.0 23 July 2003 (23.07.2003) EP

(71) Applicant (for all designated States except US): **KONIN-
KLIJKE PHILIPS ELECTRONICS N.V.** [NL/NL];
Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).

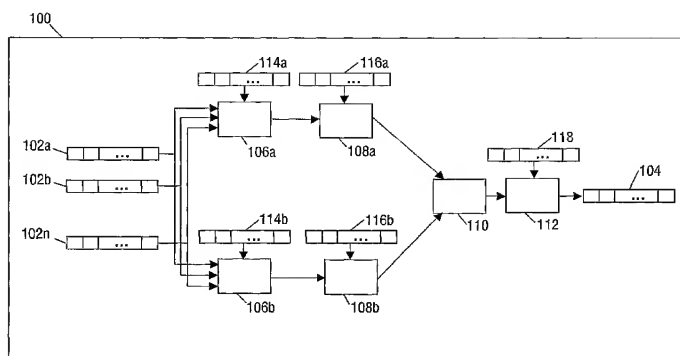
(84) Designated States (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, GH,
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,
FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,
SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,
GW, ML, MR, NE, SN, TD, TG).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **VAN BERKEL,
Cornelis, H.** [NL/NL]; c/o Prof. Holstlaan 6, NL-5656
AA Eindhoven (NL). **MEUWISSEN, Patrick, P., E.**
[NL/NL]; c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven

[Continued on next page]

(54) Title: DEVICE AND METHOD FOR COMPOSING CODES



(57) Abstract: Configurable vector processors can be equipped with code generators, so that they are capable of handling different standards and codes. Furthermore, they can be arranged to provide support for related functions such as cyclic redundancy check (CRC). A configurable vector processor would then be equipped with a plurality of generators which generate basic codes in vector format. However, a disadvantage of such a configurable vector processor is that it cannot provide a composite code which is dependent on such basic codes. This is necessary if the configurable vector processors should be flexible enough to support a variety of CDMA-like standards. The device according to the invention is provided with at least two weighted sum units, which are able to make a selection out of a plurality of incoming basic-code vectors by means of a weighted sum operation, under the control of a configuration word. The elements of this configuration word represent the weighting factors which are used to select or deselect a basic-code vector. The selected basic-code vectors are added together and the result of the weighted sum operation is then output as an intermediate-code vector. Subsequently, the intermediate-code vectors are added together by an add unit and output as a composite-code vector. The ability to make selections out of a plurality of incoming basic-code vectors and to add intermediate-code vectors into a composite-code vector, together with the ability to configure the operations of the functional units of the device by means of configuration words, increases the flexibility of the device significantly. This flexibility is needed to support a variety of transmission standards.

WO 2005/008474 A1

**Declaration under Rule 4.17:**

— as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ,

BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.